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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/726,522	12/04/2003	Kou Yamamoto	XA-10008	7198
181 7590 03/01/2007 MILES & STOCKBRIDGE PC 1751 PINNACLE DRIVE SUITE 500 MCLEAN, VA 22102-3833			EXAMINER BROWN, DREW J	
			ART UNIT 3616	PAPER NUMBER

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/01/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/726,522	Applicant(s) YAMAMOTO ET AL.	
	Examiner Drew J. Brown	Art Unit 3616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 1/16/07 (RCE).
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4,6 and 7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4,6 and 7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/16/07 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 6, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeda et al. (U.S. Pat. No. 6,467,807 B2) in view of JP 2588338.

Ikeda et al. discloses a steering column apparatus comprising a steering shaft (1) having a rear end to which a steering wheel (column 3, line 59) is secured. A steering column rotatably supports the steering shaft and the length is adjustable in the axial directions thereof together with the steering shaft. A telescopic position fixing mechanism (Figure 3) is operable to fix the steering column to a desired length, wherein the steering column includes an outer column (4) fixed on a vehicle body side and an inner column (3) telescopically fitted in the outer column (Figure 3). The telescopic position fixing mechanism includes a lock housing (6) disposed on the outer column (Figure 3), first (12b) and second (12a) press blocks, each slidably held within a bore of the lock housing, a bolt (13) passing through the first and second press blocks, where the first and second press blocks have the bolt non-threadably received therein so as to be slidable on the bolt and movable toward and away from each other to press and release the inner column so as to fix and release the telescopic position of the steering column (Figure 3). A press

Art Unit: 3616

block driving mechanism is operable to move the first and second press blocks toward and away from each other, where the press block driving mechanism includes a first cam (18) provided on the second press block and a rotatable cam (17) facing the first cam, where a lever (16) rotates the rotatable cam, and an interval regulating member, having a first-interval regulating member (15) and a second interval regulating member (head of bolt 13), regulate an interval between the rotatable cam and the first press block (column 4, lines 55-67 and column 5, lines 1-2).

Ikeda et al. discloses the claimed invention as discussed above but does not disclose that the press block driving mechanism includes a biasing device which biases the first press block and second press block away from each other.

However, Figure 4 of JP 2588338 does disclose a biasing device (39) for biasing the first press block and second press block away from each other.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Ikeda et al. in view of the teachings of Figure 4 of JP 2588338 to have a biasing device between the first and second press blocks in order to further control the force needed to clamp and unclamp the telescopic position fixing means.

Ikeda et al. discloses that the fixed cam is made integral with the second press block. When manufacturing and assembling the cam lock mechanism, the fixed cam is connected to the second press block and then fastened to it via a protrusion (18a) so the fixed cam is incapable of rotation (column 4, lines 66-67 and column 5, lines 1-2). However, Ikeda et al. does not disclose that the fixed cam and the second press block constitute a single integral body. It would have been obvious to one having ordinary skill in the art at the time the invention was made to form them of a single integral body, since it has been held that forming in one piece an article which has formerly been formed in two pieces and put together involves only routine skill in the art.

Ikeda et al. also discloses that the first and second regulating members are provided at respective end portions of the bolt so as to regulate movements, along the axis of the bolt, of the first and second press blocks to a predetermined interval. The first regulating member is in communication with the first press block (Figure 3) to regulate movement thereof along the bolt axis, a distance adjusting mechanism (17 and 18) is provided between the second regulating member and the second press block for changing a distance therebetween, and an operating lever (16) operates the distance between the second regulating member and the second press block.

Art Unit: 3616

The distance adjusting mechanism includes a first cam (18) fixedly provided on the second press block and fitted slidably on the bolt, and a rotatable cam (17) is disposed between first cam and the second regulating member to face the first cam. The distance adjusting mechanism is operated to make the distance between the second regulating member and the second press block larger, the first and second press blocks are moved toward each other so as to press the outer surface of the inner column, and when the distance adjusting mechanism is operated to make the distance between the second regulating member and the second press block smaller, the first and second press blocks are moved away from each other so as to release the pressure on the inner column (column 4, lines 55-67 and column 5, lines 1-2). Ikeda et al., however, does not disclose that the first regulating member is in direct contact with the first press block.

JP 2588338 does disclose that the first regulating member (36) is in direct contact with the first press block (25, Figure 2).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Ikeda et al. in view of the teachings of JP 2588338 to have the first regulating member in direct contact with the first press block in order to ensure a secure clamping force while also minimizing the number of parts needed.

4. Claims 1, 4, 6, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2588338 in view of Matsumoto.

JP 2588338 discloses a steering shaft having a rear end which a steering wheel is secured (Figure 1), a steering column rotatably supporting the steering shaft and being of adjustable length in axial directions thereof together with the steering shaft (Figure 4), a telescopic position fixing mechanism operable to fix the steering column to a desired length (Figure 4), wherein the steering column includes an outer column (22) fixed on a vehicle body side and an inner column (3) telescopically fitted in the outer column (Figure 4). The telescopic position fixing mechanism includes a lock housing (20) disposed on the outer column, first (right block in Figure 4) and second (left block in Figure 4) press blocks, each slidably held within a bore of the lock housing, and a bolt (31) passing through the first and second press blocks.

JP 2588338 does not disclose that the bolt is non-threadably received therein so that the first and second press blocks are slidable on the bolt and movable toward and away from each

Art Unit: 3616

other to press and release the inner column so as to fix and release the telescopic position of the steering column. JP 2588338 also does not disclose a press block driving mechanism that is operable to move the first and second press blocks toward and away from each other, where the press block driving mechanism includes a first cam provided on the second press block such that the first cam and the second press block constitute a single integral body, and a rotatable cam facing the first cam.

Matsumoto, however, does disclose a bolt (14) passing through the first and second press blocks, where the first and second press blocks have the bolt non-threadably received therein so as to be slidable on the bolt and movable toward and away from each other to press and release the inner column so as to fix and release the telescopic position of the steering column (Figure 2). A press block driving mechanism is operable to move the first and second press blocks toward and away from each other, where the press block driving mechanism includes a first cam (18) provided on the second press block, and a rotatable cam (17) facing the first cam.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of JP 2588338 in view of the teachings of Matsumoto to use a non-threaded bolt to fix and release the telescopic position of the steering column in order to obtain a smoother adjustment of the steering column. It would also have been obvious to use a press block driving means including a first cam and a rotatable cam so a bolt having both right and threads is not necessary while the cost of manufacturing does not increase (paragraph 37 of translation).

Matsumoto does not disclose that the fixed cam and the second press block constitute a single integral body. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to form them of a single integral body, since it has been held that forming in one piece an article which has formerly been formed in two pieces and put together involves only routine skill in the art.

Matsumoto discloses that the press block driving mechanism further includes an inclined guide member (9a, 9b), formed in the lock housing, to facilitate movement of at least one of the first and second press blocks away from the other (Figure 2).

JP 2588338 discloses a fastening lever (Figure 4) used for rotating the rotatable cam, first (34) and second (28) interval regulating members, where the first regulating member is in direct

Art Unit: 3616

contact with the first press block (Figure 2), which regulate an interval between the rotatable cam and the first press block (Figure 4), and a biasing device (spring in Figure 4) which biases the first press block and the second press block away from each other. When the distance between the second regulating member and the second press block is made larger, the first and second press blocks are moved toward each other so as to press the outer surface of the inner column, and when the distance between the second regulating member and the second press block is made smaller, the first and second press blocks are moved away from each other so as to release the pressure on the inner column.

Response to Arguments

5. Applicant's arguments filed on 1/16/07 have been fully considered but they are not persuasive.

With respect to the argument on page 9 that Ikeda et al. does not disclose first and second press blocks slidably held within a bore, the Examiner maintains that Ikeda et al. does contain first (12b) and second (12a) press blocks as discussed above.

With respect to the argument that the cam and the second press block do not constitute a single integral body, the Examiner notes that it would have been obvious to form them as a single integral body as discussed above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Drew J. Brown whose telephone number is 571-272-1362. The examiner can normally be reached on Monday-Thursday from 8 a.m. to 4 p.m..


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul N. Dickson can be reached on 571-272-6669. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3616

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Drew J. Brown
Examiner
Art Unit 3616

db
2/27/07

 2/28/07
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